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EXAMINER

MOUZON, LAJUANIA N

ART UNIT	PAPER NUMBER
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2109

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/13/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/714,158

Applicant(s)

SINCLAIR ET AL.

Examiner

La Juania N. Mouzon

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 November 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-35 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-35 is/are rejected.
- 7) ☒ Claim(s) 11 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 November 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>See Continuation Sheet</u> | 6) <input type="checkbox"/> Other: _____ |

Continuation of Attachment(s) 3). Information Disclosure Statement(s) (PTO/SB/08), Paper No(s)/Mail Date :1/25/2007, 5/30/2006, 8/12/2005, 8/20/2004, 5/07/2004.

DETAILED ACTION

Information Disclosure Statement

1. The information disclosure statement (IDS) submitted on 1/25/2007, 5/30/2006, 8/12/2005, 8/20/2004, and 5/07/2004 is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.
2. The 1492 form the IDS submitted on 1/25/2007 is missing in the file. The Examiner will reference the PGPub 2006/0116841 of the application 11/333,842 on their 892 form.

Drawings

3. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference characters "222" and "228" have both been used to designate a path to represent applying corrective action to device 202. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

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4. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: 606 and 602B. Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

5. The drawings are objected to because in fig. 2A there is an unlabeled line between #208 and #210. This line should be taken out seeing that it is a duplicate of #226. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate

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changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

6. The disclosure is objected to because of the following informalities: ¶0017 should read, "...approaches are described, in the following...".

Appropriate correction is required.

7. The disclosure is objected to because of the following informalities: ¶0019 should read, "...that will become apparent **from** the following ...".

Appropriate correction is required.

8. The disclosure is objected to because of the following informalities: ¶0027 should read, "...."network management system (**NMS**)"...".

Appropriate correction is required.

9. The disclosure is objected to because of the following informalities: ¶0045 should reference #226 instead of #228. "Path **226** and path 220 represent initiating diagnostic operations through review of diagnosis document 210"

Appropriate correction is required.

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10. The disclosure is objected to because of the following informalities: the number 406 should be referenced after summary block in ¶0071.

Appropriate correction is required.

Claim Rejections - 35 USC § 101

11. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

12. Claims 22-35 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. As defined in the specification a computer readable medium can be a transmission medium such as acoustic, light waves, or radio waves.

13. Software, per se:

The claims lack the necessary physical articles or objects to constitute a machine or a manufacture within the meaning of 35 USC 101. They are clearly not a series of steps or acts to be a process nor are they a combination of chemical compounds to be a composition of matter. As such, they fail to fall within a statutory category. They are, at best, functional descriptive material *per se*.

Descriptive material can be characterized as either "functional descriptive material" or "nonfunctional descriptive material." Both types of "descriptive material" are nonstatutory when claimed as descriptive material *per se*, 33 F.3d at 1360, 31 USPQ2d at 1759. When functional descriptive material is recorded on some computer-readable medium, it becomes structurally and functionally interrelated to the medium and will be statutory in most cases since use of technology permits the function of the descriptive material to be realized. Compare *In re Lowry*, 32 F.3d 1579, 1583-84, 32 USPQ2d 1031, 1035 (Fed. Cir. 1994)

Merely claiming nonfunctional descriptive material, i.e., abstract ideas, stored on a computer-readable medium, in a computer, or on an electromagnetic carrier signal,

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does not make it statutory. See *Diehr*, 450 U.S. at 185-86, 209 USPQ at 8 (noting that the claims for an algorithm in *Benson* were unpatentable as abstract ideas because “[t]he sole practical application of the algorithm was in connection with the programming of a general purpose computer.”).

Claim Objections

14. Claim 11 is objected to because of the following informalities: there is a “” before the word symptoms on line 16. Appropriate correction is required.

Claim Rejections - 35 USC § 102

15. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

16. Claims 1-35 are rejected under 35 U.S.C. 102(b) as being anticipated by Marques (A Symptom-Driven Expert System for Isolating and Correcting Network Faults).

Figures 1 –3 are reproduced below.

17. In regards to claim 1 Marques teaches a method for rule-based network management, the method comprising the computer-implemented steps of:

- a. defining and storing a set of rules (**Pg. 8 Col. 1 ¶2 - Col. 2 ¶4, teaches defining and storing a set of rules.**) in one or more Rule-Based Markup

Language ("RBML") documents (**Pg. 13 Col. 1 ¶3, teaches that the rules can be defined in any language.**),

b. wherein the one or more RBML documents include one or more tags defining one or more rule elements, and wherein the set of rules includes (**Pg. 9 Col. 2 ¶6, teaches whereas each database entry has a series of class – attributes associated with them to be interpreted by the Troubleshooter production system. According to Microsoft Dictionary 5th Ed. attribute means, in markup languages such as SGML and HTML, a name-value pair within a tagged element that modifies certain features of that element.**):

i. a symptom-event rule that identifies as a symptom a particular event occurring within the network (**Pg. 6 Col. 1 ¶5, symptom-event that identifies network events.**);

ii. and a problem-diagnosis rule that defines a problem within the network as a correlation between one or more symptoms (**Pg. 6 Col. 1 ¶3, teaches a problem-diagnosis rule that is defined based off of symptoms.**);

c. collecting and storing symptom-related data about one or more symptoms, wherein collecting and storing the symptom-related data includes monitoring the network for one or more network events identified in the symptom-event rule (**Pg. 6 Col. 1 ¶5, teaches collecting symptoms by monitoring the network**);

d. and detecting a problem within the network (**Pg. 6 Col. 1 ¶3, teaches detecting a problem within the network.**),

e. wherein detecting the problem includes applying the problem-diagnosis rule to the symptom-related data (**Pg. 6 Col. 1 ¶3, teaches applying the solution rule to the problem.**).

18. In regards to claims 2 and 23 Marques discloses reviewing the set of rules to identify and resolve a conflict between two or more rules in the set (**Pg. 9 Col. 2 ¶8 - Pg. 10 Col. 1 ¶1, teaches reviewing set of rules and resolving conflict if any appear between the rules in the set.**).

19. In regards to claims 3 and 24 Marques teaches storing the one or more RBML documents in a rule repository, wherein the rule repository includes one or more directories containing RBML documents (**Fig. 2 and Pg. 9 Col. 1 ¶4-5, teaches a database (Production System) where the RBML documents are contained.**).

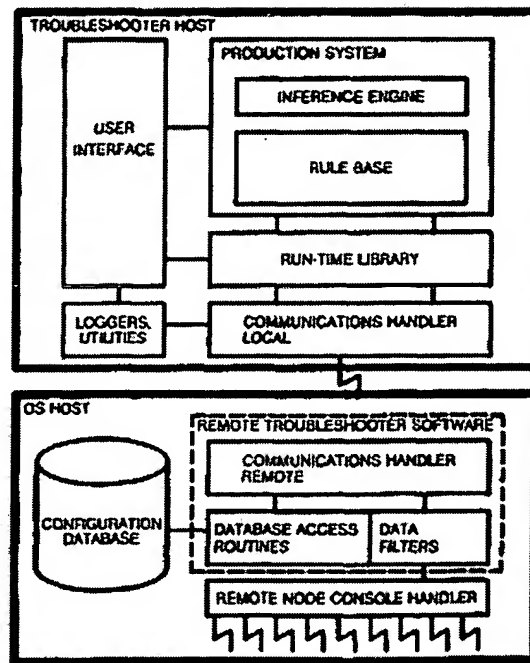


Fig. 2. Troubleshooter Architecture.

20. In regards to claims 4 and 25 Marques teaches wherein a RBML document storing the problem-diagnosis rule includes:

- f. a problem-definition tag describing a problem (Pg. 9 Col. 2 ¶6, teaches **whereas each database entry has a series of class –attributes associated with them to be interpreted by the Troubleshooter production system.**);
- g. and a correlation tag identifying the correlation between one or more symptoms, wherein the one or more symptoms are defined in one or more symptom tags that include one or more pre-defined indicators associated with the one or more symptoms (Pg. 9 Col. 2 ¶6, teaches **whereas each database entry has a series of class –attributes associated with them to be interpreted by the Troubleshooter production system.**).

21. In regards to claims 5, 12, 26, and 33 Marques teaches, wherein the step of detecting a problem within the network further comprises the steps of:

- h. comparing the symptom-related data to the one or more pre-defined indicators associated with a particular symptom to determine whether the particular symptom exists in the symptom-related data (**Pg. 6 Col. 1 ¶3, teaches comparing the symptoms to find out if they exist in the database.);**
- i. repeating the step of comparing the symptom-related data for all symptoms identified in the correlation tag of the RBML document storing the problem-diagnosis rule (**Pg. 6 Col. 1 ¶3, teaches repeatedly comparing the symptoms.);**
- j. and only if all symptoms identified in the correlation tag exist, determining that the problem identified in the problem-definition tag is detected (**Pg. 6 Col. 1 ¶3, teaches that the problem was detected when all the symptoms identified exist.).**

22. In regards to claims 6 and 27 Marques teaches, wherein a RBML document storing the symptom-event rule includes: an event tag identifying the particular event occurring on the network; and a symptom tag identifying a symptom as a generalized abstraction of the particular event (**Pg. 9 Col. 2 ¶6, teaches whereas each database entry has a series of class –attributes associated with them to be interpreted by the Troubleshooter production system.).**

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23. In regards to claims 7, 13, 28, and 34 Marques teaches, wherein the RBML document storing the symptom-event rule further includes: a profile tag identifying a particular network device (**Pg. 9 Col. 2 ¶6, teaches whereas each database entry has a series of class –attributes associated with them to be interpreted by the Troubleshooter production system.;**

k. and a command tag identifying a data-collection command , wherein the data-collection command, when executed on the particular network device, returns symptom-related data associated with the particular network device (**Pg. 8 Col. 2 ¶2, teaches a data-collection command that when executed runs diagnostic test and returns symptoms from a particular network device.**).

24. In regards to claims 8 and 29 Marques teaches, the set of rules further includes a problem-correction rule defining one or more corrective actions capable of correcting the problem within the network (**Pg. 6 Col. 1 ¶5, teaches sending the results (problem-correction rule) that includes the corrective actions capable of correcting the problem within the network.**);

l. and the method further comprises the step of recommending to a user one or more corrective actions defined in a RBML document storing the problem-correction rule (**Pg. 6 Col. 1 ¶5, teaches sending the action to the end user as recommendations of actions to resolve the problem.**).

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25. In regards to claims 9 and 30 Marques teaches, the method further comprising the step of applying to a network device, without user intervention, one or more corrective actions defined in the problem-correction rule (**Pg. 6 Col. 1 ¶5, teaches implementing the corrective action without user intervention.**).

26. In regards to claims 10 and 31 Marques teaches, wherein the network is a first network in a plurality of networks (**Pg. 7 Col. 1 ¶1- 2 ¶2, teaches a plurality of networks.**);

m. and the method further comprises the steps of: receiving a request from a user to employ a particular rule in managing a second network, separate from the first network; and distributing to a device on the second network the one or more RBML documents storing the particular rule (**Pg. 7 Col. 2 ¶1 teaches, a device receiving a request from a user for employing a rule to the device on a separate network from the first.**).

27. In regards to claim 11 Marques teaches, a method for defining a Rule-Based Markup Language ("RBML") to describe a set of rules for managing a network, the method comprising the computer-implemented steps of:

n. creating one or more RBML documents for storing the set of rules (**Pg. 8 Col. 1 ¶2 - Col. 2 ¶4, teaches defining and storing a set of rules. Whereas Pg. 13 Col. 1 ¶3, teaches that the rules can be defined in any language.**),

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o. wherein the one or more RBML documents include one or more tags defining one or more rule elements, and wherein **(Pg. 9 Col. 2 ¶6, teaches whereas each database entry has a series of class –attributes associated with them to be interpreted by the Troubleshooter production system.:**

iii. a RBML document storing a symptom-event rule from the set of rules includes: an event tag identifying a particular event occurring on the network **(Pg. 9 Col. 2 ¶6, teaches whereas each database entry has a series of class –attributes associated with them to be interpreted by the Troubleshooter production system.);**

(1) and a symptom tag identifying a symptom as a generalized abstraction of the particular event **(Pg. 9 Col. 2 ¶6, teaches whereas each database entry has a series of class –attributes associated with them to be interpreted by the Troubleshooter production system.);**

iv. and a RBML document storing a problem-diagnosis rule from the set of rules includes: a problem-definition tag describing a problem **(Pg. 9 Col. 2 ¶6, teaches whereas each database entry has a series of class –attributes associated with them to be interpreted by the Troubleshooter production system.);**

(2) and a correlation tag identifying a correlation between one or more symptoms, wherein the one or more symptoms are defined in one or more symptom tags that include one or more pre-defined

indicators associated with the one or more symptoms (**Pg. 9 Col. 2 ¶6, teaches whereas each database entry has a series of class –attributes associated with them to be interpreted by the Troubleshooter production system.);**

p. and generating, from information stored in one or more tags of the one or more RBML documents, one or more sequences of instructions, which instructions, when executed by one or more processors, cause the one or more processors to carry out the steps of (**Fig. 3 and Pg. 9 Col. 2 ¶7 – Pg. 10 Col. 1 ¶1, teaches a generating information from the stored documents that produce a series of steps that are executed by one or more processors.);**

v. collecting and storing symptom-related data about one or more symptoms, wherein collecting and storing the symptom-related data includes monitoring the network for one or more network events identified in the symptom-event rule (**Pg. 12 Col. 1 ¶7- Col. 2 ¶5 , teaches collecting and storing symptoms by monitoring the network);**

vi. and detecting a problem within the network (**Pg. 6 Col. 1 ¶3, teaches detecting a problem within the network.);**

vii. wherein detecting the problem includes applying the problem-diagnosis rule to the symptom-related data (**Pg. 6 Col. 1 ¶5, teaches applying the solution rule to the problem.);**

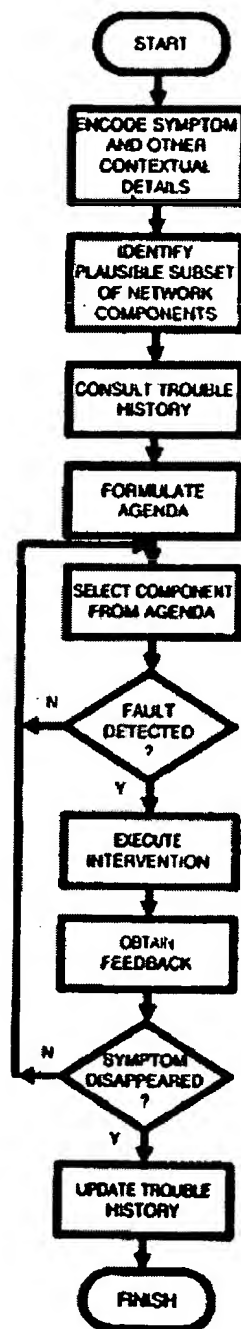


Fig. 3. Troubleshooter Fault Isolation Methodology.

28. In regards to claims 14 and 35 Marques teaches, the step of creating one or more RBML documents further includes creating a RBML document for storing a problem-correction rule defining one or more corrective actions capable of correcting

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the problem within the network (**Pg. 8 Col. 2 ¶3 - ¶6, teaches creating a document for storing a problem-corrections rule that defines the corrective actions capable of correcting the problem within the network.**);

q. and the step of generating instructions includes generating one or more sequences of instructions, which instructions, when executed by the one or more processors, cause the one or more processors to carry out the step of recommending to a user the one or more corrective actions defined in the RBML document storing the problem-correction rule (**Fig. 3 and Pg. 9 Col. 2 ¶7 – Pg. 10 Col. 1 ¶1, teaches a generating instructions to be executed by one or more processors to send recommendation to the end user of corrective actions to correct the problem.**).

29. In regards to claim 15 Marques teaches, an apparatus for rule-based network management, rule editor for creating and storing comprising (**Pg. 9 Col. 2 ¶1, teaches a rule editor for creating and storing documents.**):

r. in one or more Rule-Based Markup Language ("RBML") documents containing one or more tags (**Pg. 9 Col. 2 ¶6, teaches whereas each database entry has a series of class –attributes associated with them to be interpreted by the Troubleshooter production system.**),

s. a set of rules employed in managing the network, wherein the set of rules includes: a symptom-event rule that identifies as a symptom a particular event

occurring within the network (**Pg. 6 Col. 1 ¶5, symptom-event that identifies network events.**);

viii. and a problem-diagnosis rule that defines a problem within the network as a correlation between one or more symptoms (**Pg. 6 Col. 1 ¶3, teaches a problem-diagnosis rule that is defined based off of symptoms.**);

t. one or more processors (**Fig. 2, as shown on pg. X, and Pg. 9 Col. 1 ¶1-Col. 2 ¶6, teaches one or more processors**);

u. a diagnosis engine including one or more stored sequences of instructions which, when executed by the one or more processors, cause the one or more processors to carry out the steps of (**Pg. 9 Col. 1 ¶3 - ¶4, teaches a diagnosis engine that has stored sequences of instructions that are executed by a processor**);

ix. collecting and storing symptom-related data about one or more symptoms, wherein collecting and storing the symptom-related data includes monitoring the network for one or more network events identified in the symptom-event rule (**Pg. 6 Col. 1 ¶5, teaches collecting and storing symptoms by monitoring the network.**);

x. and detecting a problem within the network (**Pg. 6 Col. 1 ¶3, teaches detecting a problem within the network.**),

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xi. wherein detecting the problem includes applying the problem-diagnosis rule to the symptom-related data (**Pg. 6 Col. 1 ¶3, teaches applying the solution rule to the problem.**).

30. In regards to claim 16 Marques teaches wherein the rule editor is capable of providing to a user means for reviewing the set of roles to identify and resolve a conflict between two or more rules in the set (**Pg. 9 Col. 2 ¶1, teaches a rule editor for creating and storing documents.**).

31. In regards to claim 17 Marques teaches, the problem-diagnosis rule defining the correlation between one or more symptoms includes one or more pre-defined indicators associated with the one or more symptoms (**Pg. 6 Col. 1 ¶3, teaches a problem-diagnosis rule that is defined based off of symptoms.**);

v. and the diagnosis engine instructions for carrying out the step of detecting a problem within the network further include instructions for carrying out the steps of (**Pg. 9 Col. 1 ¶3 - ¶4, teaches a diagnosis engine that has stored sequences of instructions that are executed by a processor**):

xii. comparing the symptom-related data to the one or more pre-defined indicators associated with a particular symptom to determine whether the particular symptom exists in the symptom-related data (**Pg. 6 Col. 1 ¶3, teaches comparing the symptoms to find out if they exist in the database.**);

xiii. repeating the step of comparing the symptom-related data for all symptoms identified in the correlation tag of the RBML document storing the problem-diagnosis rule (**Pg. 6 Col. 1 ¶3, teaches repeatedly comparing the symptoms.**);

xiv. and only if all symptoms identified in the correlation tag exist, determining that the problem identified in the problem-definition tag is detected (**Pg. 6 Col. 1 ¶3, teaches that the problem was detected when all the symptoms identified exist.**).

32. In regards to Claim 18 Marques teaches, wherein the symptom-event rule further includes: information identifying a particular network device (**Pg. 8 Col. 1 ¶2 – Col. 2 ¶6, teach the information identifies a particular network device.**)

w. a data-collection command, wherein the data-collection command, when executed on the particular network device, returns symptom-related data associated with the particular network device (**Pg. 8 Col. 2 ¶2, teaches a data-collection command that when executed runs diagnostic test and returns symptoms from a particular network device.**).

33. In regards to Claim 19 Marques teaches, the set of rules further includes a problem-correction rule defining one or more corrective actions capable of correcting the problem within the network (**Pg. 8 Col. 2 ¶3 - ¶6, teaches creating a document for**

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storing a problem-corrections rule that defines the corrective actions capable of correcting the problem within the network.);

x. and the diagnosis engine further includes instructions which, when executed by the one or more processors, cause the one or more processors to carry out the step of recommending to a user one or more corrective actions defined in the problem-correction rule (**Fig. 3, as shown on pg. 15, and Pg. 9 Col. 2 ¶7 – Pg. 10 Col. 1 ¶1, teaches a generating instructions to be executed by one or more processors to send recommendation to the end user of corrective actions to correct the problem.**).

34. In regards to Claim 20 Marques teaches, wherein the diagnosis engine further includes instructions which, when executed by the one or more processors, cause the one or more processors to carry out the step of applying to a network device, without user intervention, one or more corrective actions defined in the problem-correction rule (**Pg. 6 Col. 1 ¶5, teaches implementing the corrective action without user intervention.**).

35. In regards to Claim 21 Marques teach, wherein: the network is a first network in a plurality of networks (**Pg. 7 Col. 1 ¶1- 2 ¶2, teaches a plurality of networks.**);

y. and the apparatus further includes a rule broker (**Pg. 9 Fig. 2, as shown above on pg. 9, and Pg. 9 Col. 1 ¶1 - ¶5 teaches, a rule broker.**),

z. wherein the rule broker receives a request from a user to apply a particular rule in managing a second network, separate from the first network, and distributes to a device on the second network the one or more RBML documents storing the particular rule (**Pg. 7 Col. 2 ¶1 teaches, a the rule broker receiving a request from a user for employing a rule to the device on a separate network from the first.**).

36. In regards to claim 22 Marques teaches, a computer-readable medium carrying one or more sequences of instructions for rule-based network management, which instructions, when executed by one or more processors, cause the one or more processors to carry out the steps of (**Fig. 1 and Pg. 6 Col. 1 ¶3, teaches a computer-readable medium for executing the instructions for the rule-based network management system.**):

aa. defining and storing a set of rules (**Pg. 8 Col. 1 ¶2 - Col. 2 ¶4, teaches defining and storing a set of rules.**) in one or more Rule-Based Markup Language ("RBML") documents (**Pg. 13 Col. 1 ¶3, teaches that the rules can be defined in any language.**),

bb. wherein the one or more RBML documents include one or more tags defining one or more rule elements, and wherein the set of rules includes (**Pg. 9 Col. 2 ¶6, teaches whereas each database entry has a series of class – attributes associated with them to be interpreted by the Troubleshooter production system.**):

- xv. a symptom-event rule that identifies as a symptom a particular event occurring within the network (**Pg. 6 Col. 1 ¶5, symptom-event that identifies network events.**);
- xvi. and a problem-diagnosis rule that defines a problem within the network as a correlation between one or more symptoms (**Pg. 6 Col. 1 ¶3, teaches a problem-diagnosis rule that is defined based off of symptoms.**) ;
- cc. collecting and storing symptom-related data about one or more symptoms, wherein collecting and storing the symptom-related data includes monitoring the network for one or more network events identified in the symptom-event rule (**Pg. 6 Col. 1 ¶5, teaches collecting and storing symptoms by monitoring the network.**);
- dd. and detecting a problem within the network (**Pg. 6 Col. 1 ¶3, teaches detecting a problem within the network.**),
- ee. wherein detecting the problem includes applying the problem-diagnosis rule to the symptom-related data (**Pg. 6 Col. 1 ¶3, teaches applying the solution rule to the problem.**).

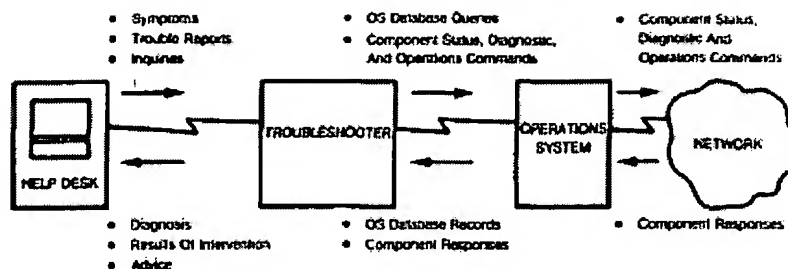


Fig. 1. Troubleshooter: An Intelligent Front-End to an Existing Operations System.

37. In regards to claim 32 Marques teaches, a computer-readable medium carrying one or more sequences of instructions for defining a Rule-Based Markup Language ("RBML") to describe a set of rules for managing a network, which instructions, when executed by one or more processors, cause the one or more processors to carry out the steps of (Fig. 1 and Pg. 6 Col. 1 ¶3, teaches a computer-readable medium for executing the instructions for the rule-based network management system.):

ff. creating one or more RBML documents for storing the set of rules (Pg. 8 Col. 1 ¶2 - Col. 2 ¶4, teaches defining and storing a set of rules.),

gg. wherein the one or more RBML documents include one or more tags defining one or more rule elements, and wherein (Pg. 9 Col. 2 ¶6, teaches whereas each database entry has a series of class –attributes associated with them to be interpreted by the Troubleshooter production system.):

xvii. a RBML document storing a symptom-event rule from the set of rules includes: an event tag identifying a particular event occurring on the network (Pg. 9 Col. 2 ¶6, teaches whereas each database entry has a

series of class –attributes associated with them to be interpreted by the Troubleshooter production system.);

(3) and a symptom tag identifying a symptom as a generalized abstraction of the particular event (**Pg. 9 Col. 2 ¶6, teaches whereas each database entry has a series of class –attributes associated with them to be interpreted by the Troubleshooter production system.);**

xviii. and a RBML document storing a problem-diagnosis rule from the set of rules includes: a problem-definition tag describing a problem (**Pg. 9 Col. 2 ¶6, teaches whereas each database entry has a series of class –attributes associated with them to be interpreted by the Troubleshooter production system.);**

(4) and a correlation tag identifying a correlation between one or more symptoms, wherein the one or more symptoms are defined in one or more symptom tags that include one or more pre-defined indicators associated with the one or more symptoms (**Pg. 9 Col. 2 ¶6, teaches whereas each database entry has a series of class –attributes associated with them to be interpreted by the Troubleshooter production system.);**

hh. and generating, from information stored in one or more tags of the one or more RBML documents, one or more sequences of instructions, which instructions, when executed by one or more processors, cause the one or more

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processors to carry out the steps of (Fig. 3, as shown on pg. 15, and Pg. 9 Col. 2 ¶7 – Pg. 10 Col. 1 ¶1, teaches a generating information from the stored documents that produce a series of steps that are executed by one or more processors.):

- xix. collecting and storing symptom-related data about one or more symptoms, wherein collecting and storing the symptom-related data includes monitoring the network for one or more network events identified in the symptom-event rule (Pg. 6 Col. 1 ¶5, teaches collecting and storing symptoms by monitoring the network.);
- xx. and detecting a problem within the network (Pg. 6 Col. 1 ¶3, teaches detecting a problem within the network.),
- xxi. wherein detecting the problem includes applying the problem-diagnosis rule to the symptom-related data (Pg. 6 Col. 1 ¶3, teaches applying the solution rule to the problem.).

Conclusion

38. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Miller et al. (US 7,058,860) a system and method of automatic parameter collection and problem solution generation for computer storage devices.

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39. Any inquiry concerning this communication or earlier communications from the examiner should be directed to La Juania N. Mouzon whose telephone number is 571-270-3045. The examiner can normally be reached on Monday - Friday 8:00-5:00.

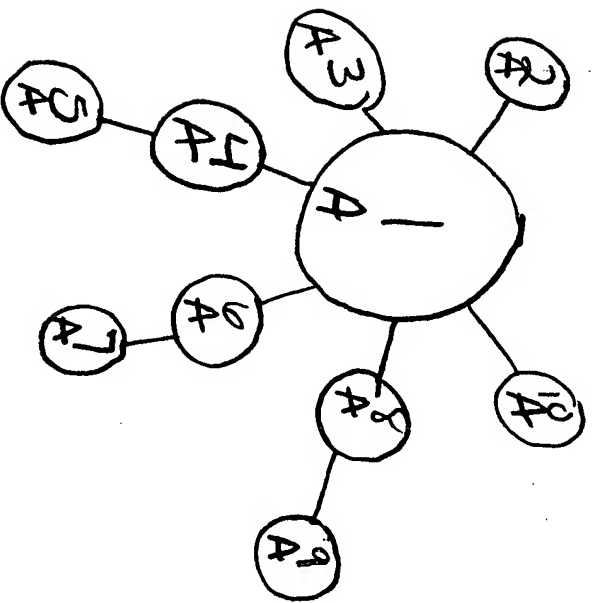
40. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Assouad can be reached on 571-272-2210. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

41. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

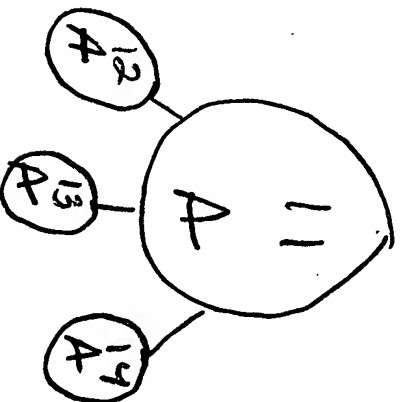
LNM


N. DREW RICHARDS
PRIMARY EXAMINER

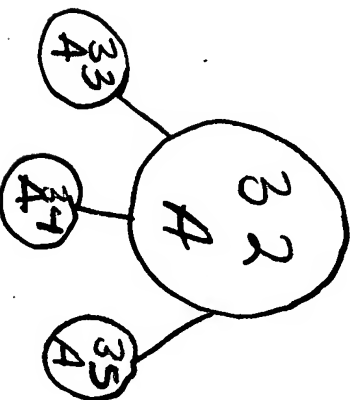
Method #1



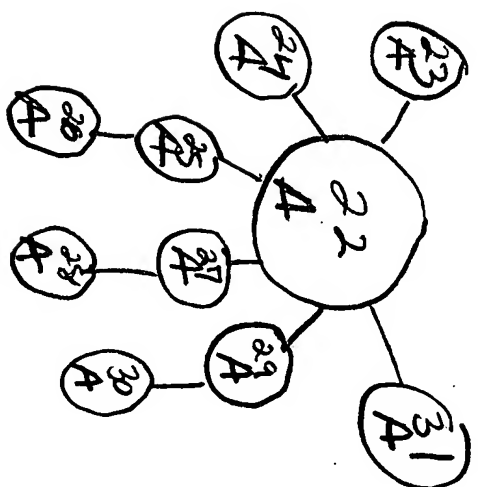
Method #2



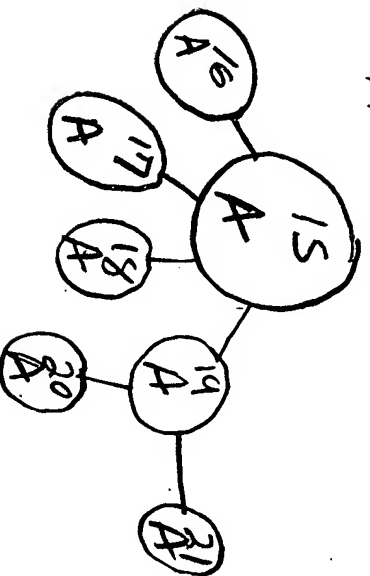
Computer readable
medium #2



Computer readable
medium #1



Apparatus



A) Marques (Asymptom-Driven Expert System for Isolating and Correcting Network Faults)